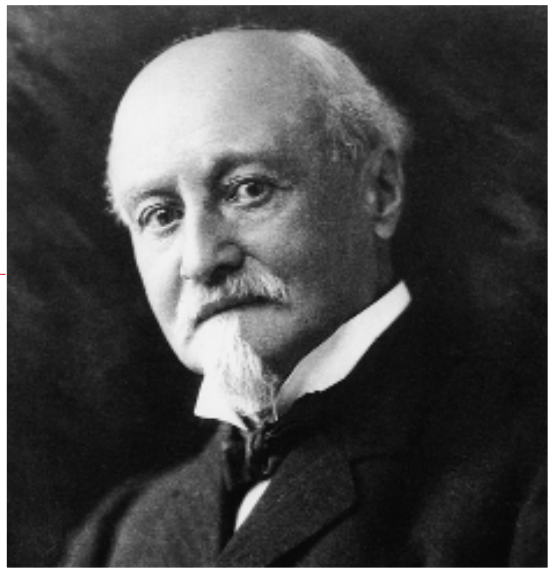
Tom D. Crouch

Octave Chanute

Aeronautical Pioneer



Octave Chanute, American aviation pioneer.

Each year more than a million people journey to northern Indiana to relax in the sun and sand and savor the natural beauty of Dune country. All too few of the visitors to Indiana Dunes National Lakeshore realize what an important role this area played in the story of the invention of the airplane. It was here, in the spring and summer of 1896, that Octave Chanute and four young assistants helped to set the stage for the achievement of powered flight with a series of important glider trials.

A native of Paris, France, born on February 18, 1832, Octave Chanute immigrated to the United States with his father in 1838. Educated in New York schools, he took his first job in 1844 as a member of a surveying crew laying out the route of the Hudson River Railroad. Over the next 30 years he rose to the rank of chief engineer with a number of the most important railroads in the nation. He was responsible for building the first bridge over the Missouri River and supervised the construction of railroads that opened the West to settlement. Virtually every cow driven north from Texas passed through the stockyards Chanute designed for Chicago and Kansas City. His services as a civil leader and urban planner were critical to the development of towns across the West.

By 1890, Octave Chanute, now one of the best known and most successful civil engineers in the nation, had established both a consulting practice and a wood preservation firm in Chicago. At last he would have some spare time to pursue his hobby—flying machines. Chanute had been fascinated by the problem of flight for almost two decades. He had corresponded with virtually every major aeronautical experimenter in the world and sponsored discussions of flight at important engineering conferences. In the process, he had created an informal network of serious aviation experimenters that would shape the early development of the technology. The first fruit of his effort was the publication of *Progress in Flying Machines* in 1894. One of the most important books published on aviation up to that time, the volume provided a remarkably complete record of what had been accomplished in the past and pointed the way to the future.

As early as 1894, inspired by the work of the German glider experimenter Otto Lilienthal, Chanute began to design gliders capable of carrying human beings into the air. Anxious to provide employment for younger engineers and flying machine enthusiasts, he began contracting for the construction of several gliders. He selected the sand dunes along the southern shore of Lake Michigan as the perfect place to test his creations. The area was close to Chicago. The little train station at Miller, Indiana served as an entry point into Dune country. The area offered a number of other important advantages, including steady winds, dunes from which a glider could be launched in any direction, an abundance of sand for soft landings, and, Chanute hoped, relative isolation.

Chanute and his four assistants pitched their tents on a spot within the present city limits of Gary, Indiana, on June 22, 1896. Augustus Herring, the most experienced member of the group, had brought a glider based on the standard Lilienthal monoplane design. William Avery, a Chicago carpenter, had constructed a multi-wing glider designed by Chanute, while William Butusov would attempt to launch his own glider, the Albatross, down a wooden ramp. Dr. James Ricketts, a Chicago physician with "a slack practice and a taste for aeronautics," would cook for the group and provide emergency med-

ical service as required. Chanute's dogs, Rags and Tatters, rounded out the party.

Herring and Avery did most of the flying. The Lilienthal glider proved to be a disappointment. Chanute's glider, featuring multiple sets of wings that could be arranged in various configurations, was more interesting, covering distances of from 50–116 feet through the air. The group returned to Chicago on July 4. They would spend the next month repairing their various craft and building a new glider featuring three wings set one on top of the other, all linked together with a truss of the sort that Chanute had employed in constructing railroad bridges. Herring was apparently responsible for the cruciform tail.

The five men returned to the Dunes on August 21, 1896, establishing a new camp some five miles down the beach from their original site. After some disappointing test flights, Chanute ordered the bottom wing removed from the new glider, producing a biplane design. With that modification complete, Herring and Avery were soon making repeated flights of over 200 feet in length, occasionally traveling as far as 350 feet through the air. By the time the group broke camp for good on September 25, 1896, they had completed several hundred flights with the biplane. For the moment, the little craft was the most successful heavier-than-air flying machine in the world.

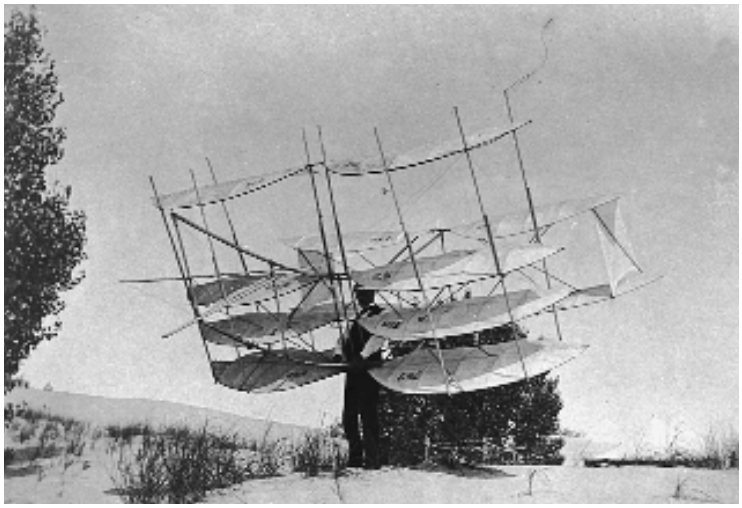
The 1896 biplane tested on the Indiana Dunes proved to be a key step on the road to the invention of the airplane. Herring continued to experiment with the design on his own over the next five years. Chanute's publication of the plans and specifications for the glider helped to spark a renewed interest in flight both in America and Europe. In May 1900, Octave Chanute received a letter from Wilbur Wright. "Afflicted with the belief that flight is possible to man," the Wrights had designed a glider of their own. "In appearance," Wilbur noted, "it is very similar to the 'double-deck' machine with which the experiments of yourself and Mr. Herring were conducted in 1896–97."

The letter marked the beginning of an association that would continue until Chanute's death in November 1910. During the years 1900–1905, when the genius of the Wright brothers carried them far beyond any of their predecessors to the ultimate goal of the invention of the airplane, Chanute was their closest friend and most important supporter. While disagreements drove the three men apart after 1905, the Wrights never forgot how important the friendship and inspiration of Octave Chanute had been to them during the early years.

"His labors had vast influence in bringing about the era of human flight," Wilbur Wright observed at the time of Chanute's death. "No one was too humble to receive a share of his time. In patience and goodness of heart he has rarely been surpassed. Few men were more universally respected and loved."

Modern visitors to Indiana Dunes National Lakeshore and Indiana Dunes State Park will find little to remind them of the significance of the area to the history of flight. The dune from which the Chanute party conducted their first experiments (June 22–July 4, 1896) stood within the present city limits of Gary, Indiana, northeast of the Lake Street Bridge and west of the refurbished Aquatorium building. Streets and buildings cover the actual site of the dune, but the spot is commemorated with a plaque. A National Soaring Society historic marker is located in front of the Aquatorium. Current plans call for the installation of exhibits on Chanute and on the Tuskeegee Airmen of World War II in this building.

There is nothing to identify the site of Dune Park, where the second round of flight tests were conducted (August 21–September 26, 1896). The area is some five miles east of the Miller Beach site, where, Chanute noted: "the hills were higher, the solitude greater, and the path … more obscure." The historic dunes from which the first Chanute–Herring biplane was flown is now covered by the remains of a Midwest steel plant.



Octave Chanute tries the famous biplane glider on for size during the Indiana Dunes trials of 1896. Chanute did not make any flights himself.

Tom D. Crouch, Ph.D., is the Senior Curator of Aeronautics, National Air and Space Museum, Smithsonian Institution.